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10/737,219

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David Elie-Dit-Cosaque

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11/10/2010

GARLICK, HARRISON & MARKISON (ALU)

P.O. BOX 160727

AUSTIN, TX 78716-0727

EXAMINER

ADHAMI, MOHAMMAD SAJJID

ART UNIT

PAPER NUMBER

2471

NOTIFICATION DATE

DELIVERY MODE

11/10/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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GHMdocketing@cpaglobal.com

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|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/737,219 | Applicant(s) ELIE-DIT-COSAQUE ET AL. | |
| | Examiner MOHAMMAD S. ADHAMI | Art Unit 2471 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-7,11 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7,11,15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's RCE filed 11/30/2009 is acknowledged.
- Claims 1 and 11 have been amended.
- Claims 2-4, 8-10, 12-14, and 18-22 are cancelled.
- Claims 1, 5-7, 11, and 15-17 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2009 has been entered.

Election/Restrictions

2. Applicant's election without traverse of claims 1, 5-7, 11, and 13-17 in the reply filed on 8/30/2010 is acknowledged.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 11 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "the customer virtual LAN" in lines 11-12.

There is insufficient antecedent basis for this limitation in the claim.

In claim 11, it is indefinite if the address memory file in line 20 is meant to be the MAC address memory file or if it is a new and separate address memory file.

Claims 15-17 are rejected because they depend from a rejected claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5-7,11, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benedetto (US App. 2005/0259597) in view of Gai (US App. 2002/0147800).

Re claims 1 and 11:

Benedetto discloses *a provider edge bridge* (Fig.2 and Para.[0028,0056,0092] bridge/switches exchange bridge protocol data units (BPDU)).

Benedetto further discloses *communication between two or more customer local area network (LAN) segments through a provider network (Fig.2 plurality of LANs 202-214 and meshed computer network 200).*

Benedetto further discloses *the provider network having one or more provide edge bridges coupled to the customer edge bridges (Fig.2 switch 218 and Fig. 7).*

Benedetto further discloses *in at least one of the provider edge bridges coupled to a customer LAN segment, receiving topology change notifications (TCNs) from the customer network in response to a topology change in one or more of the customer virtual LAN segments (Fig.2 switch 227, LAN segment 214 and Para.[0092] switch 227 detects a change in active topology and generated an BPDU having a TCN).*

Benedetto further discloses *in response to receiving a TCN, monitoring end host MAC addresses in data units received from the customer network for a predetermined time period (Para,[0019,0092,0113] in response to receiving a TCN, the switch monitors for BPDU TCN on each address port and the TCN-PDU is transmitted with an aging time set to a predetermined time of fifteen seconds).*

Benedetto suggest *determining whether a topology change has occurred in one or more of the customer virtual LAN segments that affects paths of data units through the provider network by(Para,[0019,0092,0113] in response to receiving a TCN, the switch monitors for BPDU TCN on each address port and*

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the TCN-PDU is transmitted with an aging time set to a predetermined time of fifteen seconds); *monitoring whether a predetermined number of new end host MAC addresses of data units received from the customer network in the predetermined time period are not found in a MAC address memory file*(Para.[0019 filtering database is flushing an address memory file and Para.[0019] to prevent bridges from distributing messages based upon incorrect address information, bridges quickly age-out and discard the "old" information in their filtering database), *wherein the MAC address memory file associates end host MAC addresses with ports of the provider edge bridge* (Para.[0031,0053,0059]); *monitoring whether a contradiction occurs between an end host MAC address of a data unit received from the customer network and the MAC address memory file detecting a predetermined number of end host addresses of data units received in the predetermined time period is not found in the address memory file* (Para.[0019 filtering database is flushing an address memory file and Para.[0019] to prevent bridges from distributing messages based upon incorrect address information, bridges quickly age-out and discard the "old" information in their filtering database).

Benedetto further discloses *flushing the MAC address memory file in response to determining that a topology change has occurred in one or more of the customer virtual LAN segments affecting paths of data units through the provider network* (Para.[0019] upon expiration of the predefined default time of

15 seconds, the memory database containing topology change message is quickly discarded/flushed).

Benedetto does not explicitly disclose *in response to determining a topology change in one or more of the customer LAN segments do not affect paths of data units through the provider network, storing the new end host MAC address of data units received from the customer network in the predetermined time period in the MAC address memory file without flushing the MAC address memory file.*

Gai discloses *in response to determining a topology change in one or more of the customer LAN segments do not affect paths of data units through the provider network, storing the new end host MAC address of data units received from the customer network in the predetermined time period in the MAC address memory file without flushing the MAC address memory file* (Para.[0026] The transition to a new forwarding port is accomplished without other devices having to discard contents of their filtering databases – where a filtering database is a MAC address memory file and when a new forwarding port is learned, it is stored).

Benedetto and Gai are analogous because they both pertain to data communication.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Benedetto to include storing a new address in the

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address memory file without flushing the address memory file as taught by Gai in order to more efficiently update a route cache.

Re claims 5 and 15:

Benedetto suggests *storing a list of end host addresses that are received during the predetermined time period and are not found in the address memory file* (Para.[0019] filtering database).

Re claims 6 and 16:

Benedetto discloses *the end host address are media access control (MAC) addresses* (Para.[0031,0053,0059]).

Re claims 7 and 17:

Benedetto discloses *the data units are frames* (Para.[0007,0012,0018,0024,0037]).

Response to Arguments

3. Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD S. ADHAMI whose telephone number is (571)272-8615. The examiner can normally be reached on Monday-Friday 8-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571)272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohammad S Adhami/
Examiner, Art Unit 2471

/Chi H Pham/
Supervisory Patent Examiner, Art
Unit 2471